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WHAT IS CLAIMED IS:

1. An isolated bacterium comprising: an F' episome that confers high efficiency transformability; one or more mutations that allow transformation of methylated nucleic acids; one or mutations that allow transformation with unmethylated nucleic acids; and one or more mutations that confer resistance to bacteriophage infection.
2. The bacterium of claim 1 wherein said bacterium is an *Escherichia coli* strain.
3. The bacterium of claim 2 wherein said strain is K-12.
4. The bacterium of claim 3 wherein the genotype of said F' episome comprises *proAB*<sup>+</sup> *lacI*<sup>q</sup> *lacZ*ΔM15 *Tn10*(Tet<sup>R</sup>).
5. The bacterium of claim 3 wherein said one or more mutations that allow transformation of unmethylated nucleic acids involve the *hsdR*, *hsdM* and/or *hsdS* genes.
6. The bacterium of claim 3 wherein said one or more mutations that allow transformation of methylated nucleic acids involve the *mcrA*, *mcrBC* and/or *mrr* genes.
7. The bacterium of claim 3 wherein said bacteriophage is phage T1.
8. The bacterium of claim 3 wherein said one or more mutations that confer resistance to bacteriophage infection involve the *tonA* gene.

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9. An isolated *Escherichia coli* K-12 bacterium, said bacterium having a genotype comprising *mcrA*  $\Delta(mrr-hsdRMS-mcrBC)$  *tonA* / F' *proAB*<sup>+</sup> *lacI*<sup>q</sup> *lacZ* $\Delta$ M15 *Tn10*(Tet<sup>R</sup>).
10. The bacterium of claim 9, wherein said genotype comprises: *mcrA*  $\Delta(mrr-hsdRMS-mcrBC)$   $\phi 80(lacZ)\Delta$ M15  $\Delta(lacZYA-argF)$  U169 *endA1* *recA1* *supE44* *thi-1* *gyrA96* *relA1* *deoR* *tonA* *panD* / F' *proAB*<sup>+</sup> *lacI*<sup>q</sup> *lacZ* $\Delta$ M15 *Tn10*(Tet<sup>R</sup>).
11. The bacterium of claim 9, wherein said bacterium is *Escherichia coli* BRL3946 (NRRL accession No. B-30640).
12. The bacterium of claim 9, wherein said bacterium is a derivative of *Escherichia coli* BRL3946 (NRRL accession No. B-30640).